

## **EXHIBIT A**

The facts below are set out for the purposes of this agreement only. They are not a complete recitation of all of the facts known to the United States or the Commonwealth (e.g., the actions and culpability of Powers Fasteners, Inc.) and shall not constitute admissions by the United States or the Commonwealth for any purpose whatsoever. The Commonwealth and the United States are in possession of additional information and evidence, including testimony before one or more grand juries that would further amplify and provide context for the statements set forth below.

### **Construction Management Failures With Respect to Slurry Wall Construction**

1. As the Management Consultant to the MHD and the MTA on the CA/T Project, B/PB, was responsible for, among other items, managing the design and construction of the Project. B/PB was retained by the Commonwealth based upon B/PB's national and international reputation for excellence. In 1998, the CA/T Project implemented an Integrated Project Organization ("IPO"). B/PB's responsibilities continued to be controlled by the contractual work programs with the Commonwealth of Massachusetts.
2. As part of its responsibilities, B/PB maintained a Resident Engineer's Field Office ("RE's Office") for most major construction contracts. B/PB employees who worked in the RE's Offices were responsible for overseeing and monitoring the construction contractors' compliance with the construction contract. Field Engineers assigned to the RE's Office were the B/PB employees primarily responsible for the day-to-day monitoring of the construction contractors'

- activities. Field Engineers reported to a B/PB Resident Engineer, who was the head of the RE's Office and the person responsible for B/PB's performance. The major responsibilities of the RE's Office were set out in a document called the Resident Engineer's Manual. B/PB's contract required that it develop and maintain the Resident Engineer's Manual, and that the services of the RE's Office be provided in accordance with that manual and other project procedures.
3. As part of its responsibilities, B/PB was responsible for verifying and certifying that construction contractors performed and completed their work pursuant to the terms and specifications of their respective construction contracts as a prerequisite to the final payment.
  4. Approximately 15 – 20 % of the payments that construction contractors received for the construction of the I-93 tunnel were payments to construct the tunnel walls. Often, CA/T tunnel walls were constructed using a building method known as "slurry wall construction." "Slurry" is a viscous liquid ordinarily containing bentonite clay which holds excavations open prior to concrete placement. Contract specifications stated that concrete placement could not occur on a slurry wall construction unless the slurry itself was within certain specified tolerances. The tolerances were specified by the designers of the tunnel in order to help ensure that the walls were constructed properly. Most of the tunnel walls on the I-93 mainline tunnel contracts were slurry walls.
  5. B/PB oversaw and monitored construction compliance by the construction contractors by creating a reporting protocol which required certain documents to be completed prior to the commencement of certain construction activities. This

reporting protocol also required the documentation of construction deficiencies to assure that those deficiencies were properly addressed by the construction contractors and B/PB. Field Engineers were required to record significant activities and observations in Field Engineer Daily Reports (FEDRs). Any problems with construction noted in the FEDRs were to be investigated and addressed by the RE's Office. Under certain circumstances defined by the RE's Manual, a "Deficiency Report" ("DR") documenting deviations from contract specifications and/or procedures by the construction contractors was to be issued by B/PB. These reports were generally completed by one of B/PB's Field Engineers or the Resident Engineer. DRs were not supposed to be "closed out" until the particular deficiency was corrected.

6. B/PB field personnel were required to assure that "concrete placement cards" were properly filled out by the construction contractors and a representative from B/PB. Concrete placement cards were filled out for every concrete placement on the CA/T project. When the construction contractors were pouring concrete for a slurry wall, the concrete placement card was known as a "Reinforced Slurry Wall Concrete Placement Card" or "SPTC/Reinforced Slurry Wall Inspection & Concrete Placement Card." The purpose of the concrete placement card was to document that all inspections had been completed by the construction contractors' inspectors as well as B/PB's Field Engineers prior to the placement of concrete. With respect to slurry walls, the concrete placement card was to assure that the specific inspections and construction procedures necessary to the proper construction of a slurry wall panel had been completed. Project procedures stated

- that the construction contractor was not authorized to place concrete if either the construction contractors or B/PB failed to complete the concrete placement card properly.
7. As part of its responsibilities, B/PB RE's Offices were required to respond to inquiries by the construction contractors. At times, construction contractors were required to fill out a "Non-conformance Report" ("NCR"), which like a DR, documented the construction contractors' deviations from contract specifications and/or procedures. Unlike DRs that were completed by B/PB personnel, NCRs were completed by the construction contractors. When alerted to a deficiency by the construction contractors, the RE's Office was required to assure that the reported deficiency was properly corrected. If the construction contractors did not know how to handle a deficiency or wanted to deviate from contract specifications, the construction contractors could present to the RE's Office a "Request for Information" ("RFI"), which documented the construction contractors' requests for authorization to deviate from contract specifications and/or make a repair to work that failed to meet contract specifications. An RFI required a response from B/PB sufficient to resolve the inquiry.

### **The C17A1 Contract**

8. C17A1 was one of the CA/T "mainline tunnel" contracts which encompassed the northbound lanes of Interstate 93 ("I-93") from Congress Street to High Street in Boston and the southbound lanes of I-93 from High Street to Oliver Street. A major part of the contract included the construction of the tunnel walls. Modern Continental Construction ("MCC") was the construction contractor on C17A1.

9. On April 2, 1999, MCC placed concrete for slurry wall Panel EO-45. Panel EO-45 is located on the east wall of the I-93 northbound tunnel and was part of the slurry wall construction on C17A1. There were several problems with the installation of Panel EO-45. B/PB field personnel and subconsultants observed that MCC could not remove an obstruction in the trench, as required by contract specifications. B/PB field personnel allowed MCC to proceed with work despite knowing about the obstruction. The failure to remove the obstruction and the material encased by the obstruction resulted in a major structural defect in Panel EO-45. Moreover, as a result of the obstruction, MCC altered the reinforcing steel cage (“rebar cage”) designed for Panel EO-45 without authorization from the designer. B/PB field personnel knew it was improper to make any alteration to the rebar cage without final approval from a designer, but allowed the alteration nevertheless. As a result of the obstruction and/or the altered rebar cage, MCC could not properly place the concrete into the trench. As a direct consequence a large seam of unsound material became a part of Panel EO-45. B/PB did not issue a DR or otherwise flag the defect for further examination at a later date.
10. Despite knowing that Panel EO-45 was improperly constructed, MCC submitted a bill for payment for the construction in 1999. Because it had personnel at the site at the time the concrete was placed, B/PB should have known that the Panel had not been properly constructed. Furthermore, B/PB personnel or subconsultants documented the construction defects in Project files. Nevertheless, other B/PB personnel authorized payment for Modern’s services despite the fact that Panel EO-45 had not been constructed in accordance with contract specifications.

11. In or about December 2001, MCC identified a leak and a large defect in the slurry wall at Panel EO-45 and reported it to B/PB through an NCR. At or about that time, MCC also submitted an RFI requesting authorization for a suggested repair to the defect in Panel EO-45. B/PB requested additional information, which MCC failed to provide. Nevertheless, B/PB closed the RFI. The defect in the slurry wall panel was not properly repaired at that time nor was a repair procedure authorized for it.
12. Despite these opportunities, B/PB did not verify that MCC repaired the defect in Panel EO-45 according to repair procedures and B/PB did not issue a DR or any other documentation to address the problem. Despite documents maintained in Project files which indicate that the defect was not properly repaired, B/PB took no action, such as recouping payments or withholding additional retainage, and continued to authorize payment for MCC's work.
13. On September 15, 2004, the defect in slurry wall panel EO-45 burst and caused severe flooding of the roadway. This flooding created a public hazard that required closure of one lane of the I-93 northbound tunnel during peak hours and resulted in extensive traffic delays.
14. Inspection of all the slurry walls in the entire mainline tunnel conducted by B/PB subsequent to the Panel EO-45 "breach" revealed slightly over 200 unrepaired or inadequately repaired defects. Two were determined to be major (EO-45 and MW-85A), approximately 67 moderate, and approximately 142 minor requiring patching. C17A1 contained approximately 39 of these defects. Subsequent

- repairs of these defects and other work required nighttime lane closures of the I-93 tunnel for several years.
15. During that inspection process, B/PB noted another major structural defect in a slurry wall (a large seam of unsound material). That defect was in Panel MW-85A and had been previously detected and documented by B/PB personnel but had never been properly addressed. The defect in Panel MW-85A caused a leak in the slurry wall in January 2004.
  16. Approximately 230 concrete slurry wall panels were constructed on C17A1 between 1998 and 2001. Of these, approximately 210 of the concrete placement cards were not properly completed by B/PB and MCC. A review of the concrete placement cards reveals a systemic failure to meet contractual specifications, including slurry specifications, before concrete was placed.
  17. On or about and between April 22, 2002 and June 20, 2002, B/PB and MCC executed “Certificates of Beneficial Occupancy” for the C17A1 contract reflecting that the work was complete to the point that the MTA or a third party could safely occupy the area.
  18. On or about and between January 18, 2003 and March 21, 2003, B/PB and MCC executed a “Certificate of Substantial Completion” reflecting the substantial completion of C17A1 according to contract specifications. This part of the I-93 northbound tunnel was opened to the public on March 27, 2003.
  19. These Certificates of Beneficial Occupancy and Substantial Completion, which certified that the I-93 tunnel was safe for occupancy by third parties and built to specifications, were not true and accurate because documents prepared by B/PB

employees or its subconsultants and maintained in Project files demonstrated that B/PB knew that some of the slurry walls in the I-93 tunnel were not built according to contract specifications.

20. A review of project records by those B/PB individuals responsible for executing the Certificates of Beneficial Occupancy and Substantial Completion would have revealed the inaccuracy of the representations contained therein.

### **July 10, 2006 Ceiling Collapse**

21. At about 11:01 p.m. on Monday, July 10, 2006, Angel and Milena Del Valle were traveling eastbound in the left lane of the Interstate 90 (I-90) connector tunnel to the Ted Williams Tunnel in Boston, Massachusetts when a section of the concrete suspended ceiling in the connector tunnel collapsed and struck their vehicle. Milena Del Valle, who was occupying the front passenger seat, was killed, and Angel Del Valle was injured.
22. The concrete panels in this section of the suspended ceiling were held in place by steel frames which were supported by adjustable hanger rods connected to roof brackets. The brackets were attached to the tunnel roof by stainless steel bolts that were held in place by an epoxy adhesive. This system was used in the eastern-most section of all three bores of the I-90 connector tunnel and intermittently throughout the remainder of the tunnel.
23. Gannett Fleming (“Gannett”) was the designer responsible for the final design of the suspended ceiling system in the I-90 connector tunnel. MCC was the contractor responsible for constructing the suspended ceiling system in the I-90 connector tunnel. Both Gannett and MCC were dependent upon the availability



- of accurate and truthful representations regarding the epoxy from the manufacturer, Powers Fasteners, Inc. (“Powers”).
24. The epoxy that was used to suspend the ceiling was Power-Fast, Fast Set (item ## 8402 and 8422), a product marketed by Powers and sometimes labeled as NRC-1000 Gold, item # 8431 (herein collectively referred to as “Power-Fast, Fast Set”). Powers also sold an epoxy under the name Power-Fast, Standard Set.
25. Gannett’s design for the suspended ceiling for the easternmost section of the I-90 connector tunnel was finalized in October 1998. The specifications called for the use of a chemical adhesive type anchor system. Gannett prepared those specifications after being informed by a B/PB representative in January 1997 that there was a “Project wide” directive prohibiting the use of undercut anchors. There was never such a formal directive.
26. MCC produced to B/PB a series of submittals concerning the epoxy anchor system between May and November 1999. These submittals indicated that MCC intended to use Powers’ Power-Fast epoxy, without indicating whether it intended to use Fast Set or Standard Set. Gannett was the primary reviewer of these submittals and B/PB was the secondary reviewer. Gannett assigned review codes to these submittals that, according to written project procedures, should have precluded construction without an approved submittal.
27. Yet, B/PB’s RE did not follow project procedures and allowed MCC to undertake the work without approved submittals, although the approvals were ultimately obtained.

28. MCC began work on the epoxy anchor system in the connector tunnel portal area ceiling by drilling holes in June 1999 and had completed nearly all of the work by the end of 1999 using Power-Fast, Fast Set.
29. At the end of December 1999, MCC submitted to B/PB revised versions of its submittals. Again, Gannett was the primary reviewer and B/PB was the secondary reviewer. Gannett and B/PB gave these submittals a code that allowed work to proceed. The work required by the final, approved submittals did not differ from the work required by the initial submittals. These submittals had as an attachment a draft report prepared for the International Conference of Building Officials (“ICBO”) that indicated that Power-Fast, Standard Set, epoxy was permitted to be used for “long-term live load, dead load [such as the I-90 connector tunnel’s suspended ceiling], and short term loads . . .” but that Power-Fast, Fast Set, is permitted to be used for short-term loads such as those resulting from wind or earthquake forces. Both Gannett and B/PB failed to comprehend the limitation regarding Fast Set.
30. In the fall of 1999, representatives from B/PB and MCC observed five locations where epoxy anchors used to hold the suspended ceiling in place had migrated or displaced from the roof of the tunnel approximately one month after they were first installed. These particular anchors were among the earliest that Modern installed, and used to support the mock-up ceiling modules. The failed anchors caused B/PB to issue a Deficiency Report (“DR-1”) to MCC.
31. B/PB instructed MCC to conduct a physical inspection of the anchors with Powers to-determine the cause of the problem. Powers representatives met onsite

with MCC and B/PB representatives on two occasions in October, 1999. Powers failed to offer any conclusions why the anchors had pulled out, but did offer potential explanations, and recommended replacing the failed anchors and re-testing them. At no time did Powers disclose that Fast Set was unsafe for the tunnel application.

32. B/PB representatives exchanged e-mails in the weeks that followed indicating that they had not been able to identify a specific reason that the anchors in question had pulled out. The R.E. concluded that it was likely a combination of reasons. B/PB representatives also expressed a need to identify exactly which epoxy was being used in the suspended ceiling and to obtain its “track record.” B/PB did determine that Power Fast epoxy was being used but failed to appreciate the difference between Fast Set and Standard Set or to determine that Fast Set was unsafe for this application.
33. In early 2000, B/PB ordered Modern to re-test the anchors in the area of those that failed using a heavier load. Modern was also directed to test the anchors that had been installed in the HOV tunnel toward the east portal. Any anchors that failed were to be replaced.
34. From testing information, B/PB concluded that there had been “a learning curve” of installation of the anchors, and it closed DR-1 without testing anchor bolts in other areas of the tunnel bores and still unaware of the differences between Fast Set and Standard Set epoxy.

35. The anchor bolts in the area of the tunnel where the failure occurred were installed soon after the anchors installed in the HOV mock up area were pull tested. Thus, a “learning curve” explanation was flawed.
36. Additional observations of anchor bolt displacements were made by several B/PB field engineers in 2001 and 2002, although the bolts had passed the testing protocol using heavier loads put in place after DR-1. B/PB instructed MCC to replace and retest these bolts, with only a cursory evaluation of the epoxy itself and no consideration of the reopening of DR-1.
37. B/PB did not implement any formal monitoring program to identify additional displacement of epoxy anchor bolts. Nor did B/PB alert the MTA to the problem of bolts pulling out of the ceiling when it “turned over” the I-90 connector tunnel, thereby representing that the work was completed and consistent with all contract requirements.
38. On or about and between June 17, 2004 and August 9, 2004, B/PB and MCC executed “Certificates of Substantial Completion” reflecting the substantial completion of C09B2 according to contract specifications.
39. The I-90 Connector Tunnel was opened to the public on January 18, 2003 pursuant to various “Certificates of Beneficial Occupancy” executed by B/PB and MCC on or about and between September 13, 1999 and January 2003 reflecting that work was complete such that the MTA or a third party could safely occupy and utilize that tunnel area for its intended purpose.
40. These Certificates of Beneficial Occupancy and Substantial Completion certified that the connector tunnel was safe for occupancy by third parties and built to

specification. The Certificates were not true and accurate because a draft report prepared for the ICBO and attached to documents maintained in the Project files, if properly understood, indicated that potential anchor displacement would occur with the Fast Set formulation of the epoxy. B/PB should have required further investigation of the epoxy used in the tunnel ceiling system. Instead, B/PB relied on recommendations and information supplied by Powers, which failed to alert B/PB or Project personnel to the displacement problem.

41. A review of project records by those B/PB individuals responsible for executing the Certificates of Beneficial Occupancy and Substantial Completion, if they had ascertained the significance of the draft report prepared for the ICBO, would have revealed the probable inaccuracy of the representations made by B/PB in signing the certificates.
42. The National Transportation Safety Board (NTSB) determined that the cause of the ceiling collapse was the use of an epoxy anchor adhesive with poor “creep resistance,” that is, an epoxy formulation that was not capable of sustaining long-term loads inherent in the suspended ceiling design. This characteristic had been identified for Power-Fast, Fast Set epoxy in the draft report prepared for the ICBO which was attached to a December 1999 project submittal.
43. B/PB, among others, failed to account for creep resulting from the epoxy adhesive in the anchor system as a long-term failure mode in the I-90 connector tunnel.
44. In 1992, a B/PB engineer working on the CA/T Project had warned his superiors about the possibility of creep of the epoxy anchor bolts being used in the Ted Williams Tunnel’s suspended ceiling system.

45. Documents in the possession of B/PB in December 1999 reveal that B/PB noted that more information should be obtained about epoxy creep. No one from B/PB obtained creep test results for the epoxy from Powers.

**Failure to Provide Oversight on Time and Material Billing**

46. Generally, contracts on the CA/T project were fixed price contracts. Frequently, fixed price contracts were subsequently modified to provide for unanticipated additional work. Much of this additional work was paid on a “time and material” basis. This meant that the general contractor and its subcontractors (hereinafter “contractors”) were paid by the CA/T for actual expenses plus 10% for overhead and an additional 10% for profit.
47. This time and materials work was generated by changes to the original contract by the CA/T. When changes to a contract, known as “contract modifications,” were not bid at a specific price due to the uncertain scope of the new work or some other reason, they were tracked through the calculation of the actual costs incurred by the contractor performing the work. Thus, contractors were required by their contracts with MHD to detail the actual expenses they incurred in performing the work on a form titled, “Daily Report – Labor, Material & Equipment Form.” This form was commonly referred to as a “T & M” or “time and materials” slips.
48. Contractors were required to report on each time and materials slip the hours worked by each tradesperson and the classification of that tradesperson. The classification of each tradesperson determined the rate of pay for that tradesperson and, therefore, determined the amount of money that the contractors were paid for

- that tradesperson's time. For example, an apprentice tradesperson is billed at a lower hourly rate than a journeyman. The contractor certified the accuracy of the information contained within the T & M slip. Pursuant to the terms of all CA/T general construction contracts and the Resident Engineer's Manual, B/PB's Resident Engineer's Office was required to verify that the information contained within the T & M slip was substantively correct.
49. It was a part of B/PB's contractual obligations after October 1, 2001 to provide qualified personnel to staff the Project's "Claims and Changes Department." Under the MTA's management, supervision and direction, the personnel administered payments to contractors including payments for time and materials work. The Claims and Changes Department was responsible to review the claims for accuracy and approve the claims for payment.
50. Contractors submitted thousands of T&M slips to the Claims and Changes Department in support of claims for payment due to claimed changes in the contract. Contractors also submitted spread sheets, summarizing the information contained on the T&M slips in support of the T&M packet.
51. Contractors at times incorrectly recorded, and certified as accurate, apprentice workers as journeymen workers on T&M slips, thereby inflating the cost of the work performed on the T&M slips. A review of the certified payroll submitted by the contractor to the CA/T, to which the Claims and Changes Department or B/PB could request access, would have uncovered the false information.
52. Contractors at times incorrectly submitted summary spread sheets that failed to record accurately the number of apprentices as having worked on T&M contract

- modifications, when in fact apprentices had performed some of the work. A review of the T&M slips submitted in support of these spread sheets would have revealed the false information contained on the spread sheet. B/PB's Resident Engineer's Office failed to perform its obligations in this regard.
53. B/PB on certain occasions failed to adequately review the T&M packets, including the spread sheets and supporting T&M slips, and including reviewing certified payrolls for the contractors. As result, certain contractors received some inflated payments that they were not entitled to receive.

**Failure to Provide Quality Assurance Regarding Concrete**

54. Aggregate Industries supplied approximately 60% of the concrete used on the CA/T project. The vast majority of this concrete was placed in the project's tunnel walls, roofs and roadbeds.
55. The CA/T project established specifications for concrete depending on the particular application involved. Further, the CA/T project precluded the addition of water to concrete, for most applications, once the concrete had been batched at the concrete plant and generally required that the concrete be placed within ninety minutes of batching.
56. B/PB's contractual obligations required B/PB field engineers to be present for concrete placements involving tunnel structures. Further, B/PB was obligated to perform a variety of sampling tests at the work site as well as at a materials lab to verify that the concrete met contract specifications.
57. From approximately 1996 through 2004, Aggregate Industries engaged in a scheme to deliver non-specification concrete to the CA/T project. This non-



- specification concrete included concrete that was over ninety minutes old, concrete that had significant amounts of added water, and concrete that had not been batched pursuant to CA/T project specifications, although the concrete delivery tickets falsely represented that the concrete was within specification.
58. B/PB field engineers at the work site allowed concrete delivered by Aggregate Industries to be placed without identifying that it had been adulterated as described above. B/PB field engineers were occasionally present when water was added to concrete and when concrete was placed that was older than ninety minutes.
59. B/PB also failed to institute concrete testing protocols at the construction site as well as in the materials lab to determine that all concrete delivered to the Project met CA/T specifications and was placed pursuant to CA/T procedures.